

FY 1998 Technology Deployment in Environmental Management

Solutions of the Future at the INEEL

Site Technology Coordination Group
U.S. Department of Energy, Idaho Operations Office



INEEL



SEAR-NB Remediation of DNAPL

Problem: Remediation of Dense Non-Aqueous Phase Liquid (DNAPL) contamination in aquifers.

Baseline Technology: Pump and treat, however maximum concentration limits of the DNAPLs are several orders of magnitude lower than their groundwater solubility, thus limiting the ability of this method for aquifer remediation.

Innovative Technology: The INEEL developed Surfactant-Enhanced Aquifer Remediation at Neutral Buoyancy (SEAR-NB) was used in FY 98 at an EPA Superfund site in Milford, New Hampshire.

Comparison: SEAR-NB provides increased solubility of the DNAPL through the use of surfactants and provides the ability to predict and manipulate the vertical migration of the contaminants in the aquifer.

Savings:	Pump and Treat	30 years	\$30,000/gal of DNAPL removed
	SEAR-NB	11 months	\$800/gal of DNAPL removed

